Nova Scotia Research Foundation Corporation

Annual Report 84/85

86-0542/

Corporate Profile

Nova Scotia Research was established in 1946 by the Province of Nova Scotia to use science and technology to assist in the economic development of Nova Scotia.

Three operating divisions — Industry Services, Applied Science and Product Development — carry out technical assignments each year for 600 companies and government departments. The Corporation's activities focus on two themes — assistance to industry in the solution of today's technical problems and new product/process innovation in response to tomorrow's opportunities. While the Corporation uses its capabilities to serve all sectors of Nova Scotia's industrial economy, particular emphasis is placed on technological support for secondary manufacturing industry. The Corporation emphasizes the potential for ocean industry development in Nova Scotia.

Industry Services

Technical assistance to small manufacturing industry to improve productivity and technological capabilities.

Field Service
- Technical Information/ Literature Searches
- Industrial Engineering
- National Research Council's Industrial Research Assistance Program
- Technology Transfer
- In-Plant Problem Solving

Project Services
- Feasibility Studies
- Market Analysis
- Engineering Analysis and Design
- Applied Mathematics
- Glassblowing

Materials
- Mechanical and Metallurgical Testing
- Welding Procedure Qualification
- Failure Analysis
- High-tech Ceramics R&D
- Heavy Plate Fatigue R&D

Corrosion
- Corrosion Testing
- Materials Selection
- Design of Coating and Cathodic Protection Systems
- Accelerated Corrosion and Stress Corrosion R&D

Applied Science

Assistance to Government and Industry with R&D projects and services related to Nova Scotia's natural resources and their careful utilization.

Coal Technology
- Process development and economic studies relating to the utilization of Nova Scotia's coal resources.
- Coal liquefaction R&D
- Desulphurization and pyrolysis studies to produce clean-burning coal-based fuels.
- Spray testing and rheology studies on coal-liquid fuels.

Analytical and Environmental Chemistry
- Lube Oil Wear Analysis
- Drinking and Process Water Assessment
- PCB's
- Asbestos
- Environmental Monitoring
- Pressure-treated Wood Quality Monitoring

Biology
- Evaluation of mycorrhizal fungi in plant roots to improve growth of alfalfa, coniferous trees and strawberries.
- Liquid and semisolid fermentation with bacteria and fungi includes fermentation of straw as potential sheep feed.
- Microbiological services include examination of fish products, beverages, confectionary and other food products for bacteria, yeast and molds, bacterial assessment of drinking and waste water.

Geophysics
- Marine Surveys for Geotechnical and Geological Studies
- Land Geophysical Surveys
- Bore-hole Geophysical Logging
- Data Reduction, Analysis and Interpretation

Product Development

Ocean-related engineering, manufacturing and marketing group developing products for Nova Scotia manufacture with international markets.

- Marine Electrical Slip Rings
- Fluid Rotary Unions
- Diving Life-support Equipment
- Geophysical Marine Equipment
- Underwater Instrumentation

Export sales to the world-wide ocean industry marketplace are supported by agents and distributors in:

Denmark
Holland
USA
France
Singapore
Western Canada
Germany
United Kingdom

Nova Magnetics Limited, a wholly-owned subsidiary company of NSRFC, designs and manufactures magnetically-coupled "zero leakage" blowers and pumps for the nuclear and chemical industry.

Mechanical/electronic engineering and product design assistance for Nova Scotian industry.

Microelectronics assistance provided through the Applied Microelectronics Institute, a joint venture of NSRFC, Dalhousie University, and the Technical University of Nova Scotia.

Highlights 1984/85

1984/85 was a year of change as the Corporation reorganized operations to better respond to the evolving technological needs of Nova Scotia industry. Technical assistance and Research & Development activity continued to increase with 4600 assignments undertaken for 700 industry and government clients helping to solve today's technical problems and assist in the development of new products and processes for tomorrow's market opportunities. 61% of NSRFC's industry clients were companies with less than 25 employees. Hardware developed by NSRFC and manufactured jointly with local industry was exported to 15 countries in North and South America, Europe, the Middle East, and South East Asia. Financial performance was satisfactory with a 5% growth in overall revenue and a net income of $74,000. Several new thrusts were initiated to provide the facilities, equipment and technological strengths to meet future needs.

Financial Summary

		1985	1984
Income			
	Scientific and Engineering Contracts	**$3,950,453**	$3,593,900
	Grant from Province of Nova Scotia	**2,250,000**	2,356,600
	Investment Income	**215,611**	169,527
Expenses			
	Science and Engineering	**5,137,014**	4,981,561
	Administration and Occupation	**1,205,235**	1,245,393
Net income (loss)		**73,815**	(106,927)

Revenue Summary

Source of Contracts 1984/85
by $ value

University 3%

Government 48%
Federal 37%

Industry* 49%
Nova Scotia 11%
Nova Scotia 12%
Rest of Canada 4%
Foreign 33%

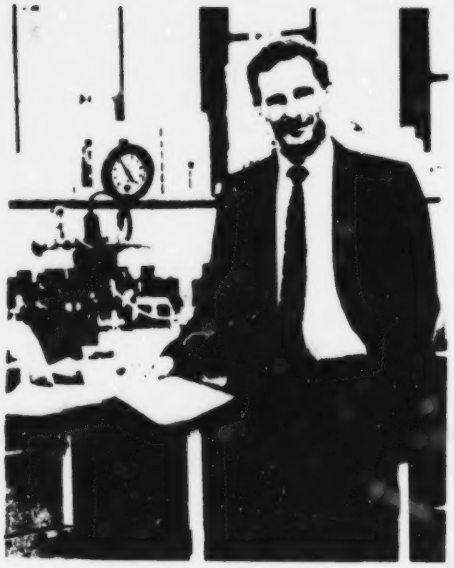
Source of Revenue 1984/85

Grant – Province of N.S. 35%

Investment Income 3%

Contracts 62%

*Includes Crown Corporations



President's Report

Honourable Roland Thornhill
Minister of Development
Province of Nova Scotia
Halifax, Nova Scotia

Sir

I have the honour to submit the thirty-eighth Annual Report of the Nova Scotia Research Foundation Corporation

Respectfully submitted

T. B. Nickerson, P. Eng.
President

Dartmouth, Nova Scotia, September 1, 1985

Reorganization

To improve efficiency and delivery of services, NSRFC's traditional grouping by scientific discipline was restructured into four divisions oriented to the Corporation's principal activities and markets. The new divisions

Applied Science
Finance & Administration
Industry Services
Product Development

are described in the *Operations Review* section of this annual report. The Vice-Presidents of the four divisions, together with myself, comprise the Corporation's senior management committee. Two new members were appointed to the Corporation's Board of Directors: Dr. J. E. Blanchard, past-president of NSRFC and Dr. J. D. McNiven, Deputy Minister of the Nova Scotia Department of Development.

Finances

Overall revenue growth of 5% included a 10% increase in contract Research & Development to $2,650.00, a 19% growth to $1,300.00 in export of hardware developed by NSRFC and manufactured jointly with local industry, and a 4% decline to $2,250.00 in the grant from the Province of Nova Scotia. The decline in the Provincial Grant reflects the special support provided by the Province in 1983/84. The Corporation's net income of $74,000 was a turnaround from the loss of $105,000 in the previous year.

Operations

The 4600 assignments completed for 700 industry and government clients included technical information to help solve specific problems, industrial engineering studies to improve productivity, materials testing, chemical and microbiological analysis to support testing and quality control programs, resource survey's, Research & Development projects to develop improved products or processes, and market feasibility studies for new opportunities. The *Operations Review* section provides examples of individual assignments. NSRFC's delivery of the National Research Council's IRAP program continues to be a key component of the Corporation's small industry assistance program.

The strong growth in hardware exports, with important indirect benefits for local industry, is the result of NSRFC's aggressive program to develop and market specialized ocean hardware for worldwide markets. Through its subsidiary, Nova Magnetics Ltd., NSRFC is addressing specialized hardware opportunities in the nuclear and chemical industries.

Two new products developed during the year will help to sustain this export growth. NSRFC's *Environmental Conditioning System (ECS)* introduces a new standard in gas conditioning for deck decompression systems in the deep sea diving industry. Nova Magnetics Ltd., with financial support from the Canadian Fusion Fuels Technology Project, developed an improved vacuum pump for tritium recovery systems. Based on an original design of the Monsanto Research Corporation, the new pump incorporates a magnetic coupling and improved manufacturing design to achieve enhanced performance at reduced cost.

NSRFC and the Nova Scotia Department of Development are undertaking a review of potential industrial development opportunities based on Nova Scotia's unique combination of natural resources and energy supplies. The study should provide a means of linking industrial strategy with natural resource and energy planning to provide the maximum benefits to Nova Scotia.

The opening of an NSRFC field office at the Nova Scotia Agriculture College (NSAC) in Truro enhanced the Corporation's capability to serve industry in Cumberland, Colchester and Pictou counties and improved NSRFC's access to the Agriculture technology base of NSAC and the Nova Scotia Department of Agriculture. NSRFC's offices at NSAC and at the Cape Breton Regional Vocational Training School, in addition to improving regional coverage, are part of a program to strengthen linkages with post-secondary education institutions and improve the industry/university interface.

NSRFC joined with Dalhousie University, NSAC, and Technical University of Nova Scotia (TUNS) to establish the Atlantic Institute of Biotechnology. With initial financial support from the Department of Regional Industrial Expansion, the new Institute will help industry in the Atlantic region to take advantage of opportunities created by the biotechnology revolution.

The outlook for 1985/86 is one of cautious optimism. Industry demand for technical assistance is projected to continue to grow as companies increasingly turn to technology to strengthen their domestic and international competitiveness. However, financial restaint at all levels of government is likely to constrain Research & Development spending while the uncertainty regarding incentives and tax credits may limit new industrial Research & Development initiatives. Exports of specialized hardware developed by NSRFC and manufactured jointly with local industry are expected to maintain the 20% growth rate of previous years.

Several initiatives launched in the past year are expected to be realized in 1985/86. A new road will be constructed linking NSRFC with the Woodside Ocean Industries Park. This will improve access to NSRFC facilities and enhance NSRFC's linkage with Nova Scotia's ocean industry development initiative.

Under the Canada/Nova Scotia Ocean Industry Subsidiary Agreement, a Technology Innovation Centre will be built adjacent to NSRFC in the Ocean Industries Park. The Centre will provide emerging companies with space, common user services and ready access to NSRFC's expertise and facilities. NSRFC will lease space in the new building to accommodate projected growth in our Product Development activities.

NSRFC, in conjunction with four other Nova Scotia Educational/ Research & Development organizations and with support from the Canada/Nova Scotia Technology transfer Subsidiary Agreement, expects to launch a major CAD/CAM initiative to encourage and support industry adoption of these and other advanced manufacturing technologies.

The Corporation's motto, *Technology in Action*, will form the theme for a program to enhance public awareness of NSRFC and to emphasize the key role of technology in developing and maintaining the industrial competitiveness that is the key to Nova Scotia's economic development.

The Next Five Years

During the past 18 months, the Corporation has been developing a plan identifying the principal programs, resources, and linkages needed over the next five years to enable the Corporation to fulfill its mandate of putting *Technology in Action* to support Nova Scotia's economic development. The plan identifies key roles for the Corporation and actions needed to strengthen the Corporation's ability to fulfill these roles.

Technology Diffusion — NSRFC with existing progams providing technical assistance to over 600 companies in Nova Scotia, has a strong capability to diffuse new technology throughout Nova Scotia industry and to help companies utilize the technologies most relevant to their needs. This delivery capability, in conjunction with the technical expertise of universities and Research & Development establishments, represents a most effective means of technology transfer to a broad spectrum of industry.

To further develop this role, NSRFC will strengthen its technical assistance programs for industry, particularly small secondary manufacture, and will locate some NSRFC staff at universities and other centres of technical excellence to better access the expanding range of technology needed to serve industry needs. This program initiative should also help to strengthen the university/industry interface.

Product Innovation — During the past decade, NSRFC's Centre for Ocean Technology has expanded from its original Research & Development role to encompass the total spectrum of innovation from idea generation to product sales. This capability to handle the total innovation process has generated important direct and indirect benefits in helping small Nova Scotia companies to tackle international market opportunities. The application of CAD/CAM technologies will be emphasized to improve productivity in all aspects of product innovation and to demonstrate the application of these technologies in a small design/manufacturing environment.

Natural Resources — The Corporation will build on its multidisciplinary scientific skills to assist resource industries and government in the most effective development and careful utilization of Nova Scotia's natural resources.

Scientific Services — NSRFC will continue to improve its specialized capabilities and equipment to make available to industry some of the scientific infrastructure needed to support Nova Scotia's industrial development.

The plan forecasts that total revenue will double to $13 million by 1990 with a modest staff increase complemented by a renewed capital investment program to enhance both technical capability and productivity. Exports of hardware developed by NSRFC and manufactured jointly with local industry are expected to increase from $1.3 million to $5 million. The grant from the Province of Nova Scotia enabling the Corporation to assist small companies and to keep abreast of new technologies is anticipated to remain at 1/3 of total income.

Conclusion

The achievements of the past year and the plans established for the future are the result of the dedicated efforts of all NSRFC staff. I would like to express my sincere thanks to the staff and to the Board of Directors for their support and enthusiasm during a year of transition and change. The expanding worldwide development of new technology presents a constantly changing spectrum of opportunities for Nova Scotia. We look forward to using our resources in conjunction with others to capitalize on these opportunities to enhance the competitiveness of Nova Scotia industry.

Operations Review

The Industry Services Division is now comprised of Field Services, Project Services, Materials, Corrosion and the Library

All operating sections of the Division had a busy year providing a range of services from assistance without charge to small industry, to performing work under contract to the Department of National Defence

The *Field Service section* operating with major funding from NRC made 2,292 contacts of which 1,346 were field visits and there were 552 contacts initiated by the client These resulted in 2,220 enquiries

Cost benefit reports from twenty-four companies reported one year savings of $1 4 million On the standard three year life of a project this would result in a total savings of $2 7 million

To improve regional coverage a Field Office was opened in Truro located on the N S Agricultural College campus This is our second Field Office, the first being located in Sydney

The Corrosion and Materials sections both carried out work for the Department of National Defence on various types of plate testing The Materials section mechanical testing and consultation services were frequently used by local industry, particularly those engaged in offshore related activities Work continued on the development of ceramic nozzles for the firing of oil-coal mixtures

Project Services continued to operate the ENERTIC program handling 217 enquiries This program was in its final year of funding under the Energy Sub-Agreement The Applied Math/Computer Systems group continued its work on fire station location This is an interesting application of the mathematical evaluation of fire station sites which results in improved coverage and protection for current and future needs This can either save money directly, or provide improved service for the same costs, both of which are excellent benefits to the municipality concerned

A total of twelve contract projects were undertaken during the year

Our *Library* continued to provide support to Corporation projects as well as being available to those who can make use of its technical services

The Applied Science Division was formed from those groups in the Biology, Chemistry and Geophysics Divisions engaged in R&D projects and services related to Nova Scotia's natural resources

The *Analytical and Environmental Chemistry Section* experienced a significant growth during the past year particularly in the lube oil wear analysis program and quality control monitoring of the pressure-treated wood process for Public Works Canada A wide variety of analytical services were provided including the analysis of metal ions, anions and organics in drinking and process waters, PCB's in oils, soils and sediments, fish meal for quality control, various petroleum products coal, insulation for asbestos, metals for type, air samples for organic and inorganic contaminants About 80% of the clients were small N S based industries of private individuals

The *Biology Section* continued work on liquid and semi-solid fermentations using bacteria as well as fungi Solid substrate fermentation of wheat and barley straw for sheep feeding trials was in conjunction with Agriculture Canada

Mycorrhizal fungi, associated with plant roots, benefit forest trees and agricultural crops by increasing uptake of nutrients by the plant and protecting against soil-borne disease An Agriculture Canada contract, assessed the potential for improving alfalfa yields by inoculating the plants with mycorrhizal fungi Another project was to study the mycorrhizal fungi associated with coniferous trees and was supported by the Canadian Forestry Service

Microbiological services to maritime companies include the examination of water supplies, waste waters, fresh fish, shellfish, canned and frozen foods, beverages, bakery products and confectionery for the presence of pathogenic and non-pathogenic bacteria, yeasts and mold

1984/85 activity in the *Geophysics Section* included gravity surveys in

New Brunswick and Cape Breton Island, with gravity data reduction and interpretation. Geophysical borehole logging for coal investigations by the Nova Scotia Department of Mines and Energy continued in Cape Breton and the Springhill area. Inshore marine geophysical surveys for a pipeline route and dredging were carried out in New Brunswick and Nova Scotia. Geophysics personnel operated marine geophysics equipment on contract in the Beaufort Sea and assisted Dalhousie University with marine seismic profiling surveys.

Equipment developments included an electronic miniconsole for small scale surface towed seismic profiling and sidescan surveys, the construction of a seismic shotgun source for land reflection seismic surveys, the preliminary design of a spark discharge shear wave generator and the design and construction of a hydrophone system for use below the ice.

The *Coal Technology Section* undertakes process development work and technoeconomic studies relating to the utilization of the Province's coal resources. Activities are concentrated on new and better uses for coal through the application of advanced and emerging technologies.

Pilot plant investigations of direct liquefaction of Sydney area coals continued with emphasis on single-stage catalytic hydrogenation. Continuous-flow experiments confirmed that catalytic hydrogenation produces higher oil yields than donor solvent extraction. Future work will concentrate on optimization of the close-coupled two reactor system to maximize distillate yield and improve hydrogen utilization. Coal liquefaction research and development is funded jointly by the Federal Department of Energy, Mines and Resources and the Nova Scotia Department of Mines and Energy.

A desulphurization project demonstrated that the application of ultrasonic energy dramatically increases the rate of sulphur removal from coal by means of air-oxidation. Pyrolysis studies focused on char reactivity measurements and the optimization of the overall process of coal-lime pyrolysis. Coal-liquid fuel studies included the development of an integrated coal-liquid fuels R&D program for Eastern Canada and a round robin intercomparison of coal-liquid fuels analysis. These projects were carried out under contract with the National Research Council.

Product Development

The Product Development Division integrates design, engineering, development, manufacture and marketing activities into a cohesive unit. The Division uses its range of resources to support the development of new high-value added products for manufacture in Nova Scotia.

The division currently is exporting the following products targeted towards offshore activity:

- Electrical Slip Rings
- Fluid Rotary Unions
- Fibre Optic Devices
- Environmental Conditioning Systems
- Magnetically Coupled Blowers and Pumps

The past year, two new products have been introduced and existing product ranges expanded. The two major additions to our product range are:

Environmental Conditioning System (ECS)

Based on our magnetic drive expertise and the wealth of life support technology gained over the past years in developments for the Canadian Navy and others, we were able, with financial assistance from the Department of Regional Industrial Expansion (DRIE), to develop and introduce a new external Environmental Conditioning System. The ECS is used in the control of internal breathing gas environments within hyperbaric chambers. This simple and reliable system has already achieved sales. The unit was accepted by British Underwater Engineering Ltd. (BUE) as the diving life support system for their new diving support vessel. BUE placed orders for four systems in the Fall of 1984 and the systems were delivered on time in December.

Vacuum Pump

NSRFC's wholly-owned subsidiary, Nova Magnetics Ltd., received development support from the Canadian Fusion Fuels Technology Program for the development of a magnetically driven vacuum pump for the safe handling and circulation of tritium gas. This development also led to orders for units which are scheduled for delivery early in the 85/86 fiscal year.

Engineering support was provided to help local industry in new product development including a magnetically coupled propeller drive, underwater telemetry system and a small boat anchor.

Over the next fiscal year the Division is focusing on the implementation and demonstration of CAD/CAM technology in the design and manufacture of NSRFC products.

Province of Nova Scotia
Nova Scotia Research Foundation Corporation

Consolidated Balance Sheet

March 31, 1985

Assets

		1985	1984
Current			
	Cash	**$ 79,437**	$ 86,898
	Accounts receivable	**1,489,893**	1,027,062
	Short term investments	**1,225,037**	879,657
	Inventory	**408,814**	253,926
		3,203,181	2,247,543
Research Endowment Fund			
	Province of Nova Scotia 10 75% promissory note, maturing November 23, 1985	**1,000,000**	1,000,000
Fixed (Schedule 2)			
	Land and buildings	**2,843,267**	2,843,267
	Equipment	**1,556,568**	1,462,462
		4,399,835	4,305,729
		$8,603,016	$7,553,272

Liabilities and Equity

		1985	1984 (restated)
Current			
	Accounts payable		
	Trade	**$ 408,598**	$ 356,118
	Province of Nova Scotia	**1,710,794**	1,164,204
	Deferred revenue	**331,726**	91,823
		2,451,118	1,612,145
Research Endowment Fund			
	Fund balance	**1,000,000**	1,000,000
Equity			
	Capital equipment reserve (Note 1)	**42,850**	—
	Contributed surplus	**4,399,835**	4,305,729
	Retained earnings	**709,213**	635,398
		5,151,898	4,941,127
		$8,603,016	$7,553,272

Auditor's Report

To the Chairman and Members of the
Board of Directors of the
Nova Scotia Research Foundation
Corporation

I have examined the consolidated balance sheet of the Nova Scotia Research Foundation Corporation as at March 31, 1985 and the consolidated statements of revenues and expenses and retained earnings for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these consolidated financial statements present fairly the financial position of the Corporation as at March 31, 1985 and the results of its operations for the year then ended, in accordance with generally accepted accounting principles, as modified by Note 1, applied on a basis consistent with that of the preceding year.

O.P. Cormier, F.C.A.
Auditor General

Halifax, Nova Scotia
June 6, 1985

Province of Nova Scotia
Nova Scotia Research Foundation Corporation

Notes to the Consolidated Financial Statements

March 31, 1985

1 Accounting Policies

a *Principles of consolidation*
The consolidated financial statements include the accounts of Nova Magnetics Limited which is 100% owned by the Nova Scotia Research Foundation Corporation.

b *Short-term investments*
Short-term investments are stated at cost, which approximates market value.

c *Inventory*
Inventory is valued at the lower of cost and net realizable value.

d *Fixed assets and contributed surplus*
Fixed assets are acquired by purchase and by donation.

When fixed assets are acquired out of the general revenues of the Corporation, they are charged to expense in the year of acquisition.

The costs of all capital additions, whether by purchase or donation, are recorded as fixed assets, with an offsetting credit to contributed surplus.

When fixed assets are constructed by the Corporation, the related material, labor and overhead costs are included as fixed assets in the year of expenditure.

When equipment is ten years old, the cost is removed from both the fixed asset and contributed surplus accounts.

e *Capital Equipment Reserve*
The Corporation maintains a reserve for future years' purchases of fixed assets. The current year's provision was charged to expense and credited to capital equipment reserve in the amount of $42,850.

2 Loan Guarantee

During the fiscal year ended March 31, 1984, the Corporation provided a guarantee of $90,000 to the Royal Bank of Canada as security for a loan from the bank to the Applied Microelectronics Institute. On March 31, 1985, the balance outstanding on this loan was $47,500.

3 Prior Period Adjustment

As a result of federal sales tax assessments applicable to the years 1981 to 1985, the balance of retained earnings at April 1, 1984 has been decreased by $58,692 representing the cumulative amount by which sales taxes as at that date had been assessed. Of this amount, $40,481 is applicable to 1983-84. Accounts payable and expenses have been restated to reflect this amount. The remaining $18,211 is applicable to the periods prior to April 1, 1983 and the balance of retained earnings at that date has been adjusted accordingly.

Province of Nova Scotia
Nova Scotia Research Foundation Corporation

Consolidated Statement of Retained Earnings

For the Year Ended March 31, 1985

Retained Earnings

	1985	1984 (restated)
Balance, beginning of year (Note 3)	**$635,398**	$742,325
Add: Net income (loss)	**73,815**	(106,927)
Balance, end of year	**$709,213**	$635,398

Province of Nova Scotia
Nova Scotia Research Foundation Corporation

Consolidated Statement of Revenues and Expenses

For the Year Ended March 31, 1985

Revenues and Expenses

		1985	1984 (restated)
Revenues			
	Scientific and engineering	**$3,950,453**	$3,593,900
	Grant from Province of Nova Scotia	**2,250,000**	2,356,600
		6,200,453	5,950,500
Expenses (Schedule 1)			
	Scientific and engineering	**5,137,014**	4,981,561
	Administrative and occupancy	**1,205,235**	1,245,393
		6,342,249	6,226,954
Operating loss before investment income		**141,796**	276,454
Investment income			
	Research Endowment Fund	**97,232**	105,918
	Short term investments	**118,379**	63,609
		215,611	169,527
Net income (loss)		**$ 73,815**	$ (106,927)

Board of Directors

Mr. T.B. Nickerson
Chairman
President
Nova Scotia Research
Foundation Corporation

Dr. R.H. Magarvey
Wolfville, Nova Scotia

Mr. J.C. Callaghan
President
Technical University of
Nova Scotia
Halifax, Nova Scotia

Mr. D.H. McKeough
New Glasgow, Nova Scotia

Mr. M.A. Eisenhauer
President
ABCO Limited
Lunenburg, Nova Scotia

Mr. R.F. MacNeill
Secretary to Board
Vice-President of
Finance and Administration
Nova Scotia Research
Foundation Corporation

Mr. P. Ferguson
Operations Manager
Imperial Oil Limited
Dartmouth, Nova Scotia

Mr. W.O. Morrow
President and
Chief Executive Officer
National Sea Products Ltd.
Halifax, Nova Scotia

Dr. W.I. Ford
Halifax, Nova Scotia

Dr. W.S. Shaw
Chairman, Geology Department
St. Francis Xavier University
Antigonish, Nova Scotia

Mr. W.E. MacLennan
President and General Manager
Farmers Co-operative Dairy Limited
Halifax, Nova Scotia

Senior Management

T.B. Nickerson
President and
Chief Executive Officer

D.E.T. Bidgood
Vice-President, Applied Science

J.R. Helliwell
Vice-President, Industry Services

C.R. Tyner
Vice-President, Product Development

R.F. MacNeill
Vice-President, Finance
and Administration

For copies or further information contact:

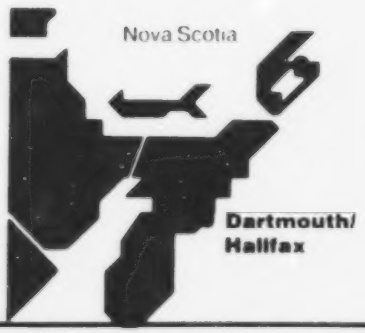
Nova Scotia Research Foundation Corporation
P.O. Box 790
Dartmouth, Nova Scotia
B2Y 3Z7
Ph 902 424 8670
Telex 019 22719

Location

NSRFC is situated on a four hectare site in Dartmouth's Woodside Ocean Industries Park and occupies a 5,670-m² laboratory building and a 560-m² pilot plant.

Field offices for the IRAP service are located in Truro at the Nova Scotia Agricultural College and in Sydney at the Cape Breton Adult Vocational School.

An agency network for export sales and identification of product development opportunities has been established throughout the United States, Europe and Southeast Asia.



Design/ Don Cuvilier Associates Limited

POOR
QUALITY
ORIGINAL